



**Montana Department of Transportation**  
**PO Box 201001**  
**Helena, MT 59620-1001**

**MEMORANDUM**

**To:** See Distribution  
**From:** Mark Wissinger, P.E.  
Construction Engineer  
**Date:** June 29<sup>th</sup>, 2006  
**Subject:** Supplemental Specification Revision: 706.04.1 Treating, 706.04.2 Incising,  
Table 706-1 Minimum Incision Depths and 706.04.3 Inspection

The Construction Administration Services Bureau is proposing revisions to Standard Specifications, 706.04.1 Treating, 706.04.2 Incising, Table 706-1 Minimum Incision Depths and 706.04.3 Inspection. Following the Standard Specification Revision Process outlined in the Construction Engineer's Memorandum dated January 9, 2002 the following information is provided.

1. Standard Specifications: 706.04.1 Treating, 706.04.2 Incising, Table 706-1 Minimum Incision Depths and 706.04.3 Inspection will be modified.
2. The Proposed Draft of the changes is attached along with this memorandum.
3. Revision to the Standard Specification is needed to align MDT standards with current AWP standards.
4. Those impacted by the change include:
  - Materials Timber Inspectors
  - Suppliers
5. The following individuals were consulted and/or involved in developing the proposed revisions:
  - Anson Moffett – Quality Control Engineer
  - Pat Hoy – Timber Inspector

*It is requested that comments on **the proposed revisions only**, be returned to the [mdtspecifications@mt.gov](mailto:mdtspecifications@mt.gov) no later than July 31<sup>st</sup>, 2006.*

**DISTRIBUTION:**

Loran Frazier	Dist. Const. Engineers	FHWA
Jim Walther	MDT Legal	MCA
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**706.04 TREATED TIMBER AND LUMBER**

Furnish structural timber and lumber, treated with a wood preservative specified as follows.

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**706.04.1 Treating**

Furnish timber and lumber that is pressure treated retaining at least the minimum preservative treatment quantity per cubic foot (cubic meter) specified in AWP

Standards and Commodity Specification A with retention specifications from Commodity specification B Use Category 4B.

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Use one of the following preservatives:

- Creosote oil, creosote coal tar solution, five percent by weight pentachlorophenol solution; or
- Chromated Copper Arsenate (CCA), Type B or C; or
- Ammoniacal Copper Arsenate (ACA).
- Copper Naphthenate (CuN)

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Use preservative meeting AWP standards.

Treated timber or lumber to receive paint must permit the paint to adhere to the treated surface without discoloration.

Meet AASHTO M 133 requirements for all preservatives and their sampling and testing methods.

Treat injuries, cuts, and holes in timber and lumber after treatment with three applications of copper napthenate solution containing a minimum two percent copper metal or with Chromate Copper Arsenate (CCA) meeting AWP M4 requirements.

**706.04.2 Incising**

Mechanically incise timber and lumber of the following listed species as specified in section 8.1 of AWP Standard T1 having a nominal thickness of 2 inches (actual 38 mm thickness) or greater before treating:

Incise timber and lumber 3 inches (63 mm actual thickness) thick or greater on all four sides. Incise timber and lumber less than 3 inches (63 mm actual thickness) thick on the wide faces only, unless otherwise specified. Ensure incision patterns for all other material are dense enough to achieve uniform depth of penetration as specified in section 8.1.12 of standard T1 in the AWP Standards. Incise Intermountain Douglas Fir then treat for penetration depth of 0.4 inch and 90% of the sapwood for produces less than 5 inches thick and treat for penetration depth of 0.5 inches and 90% of the sapwood for products 5 inches thick and greater. 1 1/2-inch (38 mm actual dimension) center-matched material used for flumes, boxes, etc., does not need to be incised.

Deleted: Intermountain Douglas Fir . . . Northern White Pine . . . Jack Pine¶  
Pacific Coast Douglas Fir . . . Red Pine . . . Red Wood¶  
Western Hemlock . . . . . Sugar Pine . . . . . Lodgepole Pine¶  
Western Larch . . . . . Western White Pine¶

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Follow the requirements for minimum incision depths in Table 706-1:

**TABLE 706-1**  
**MINIMUM INCISION DEPTHS**

SIZE IN INCHES (mm)	MINIMUM DEPTH OF INCISION inch (mm)
1 1/2 x 12 (38 x 286)	3/8 (9)
3 x 12 (63 x 290)	7/16 (11)
4 x 12 (89 x 290)	1/2 (13)
<u>6 x 8 (145 x 190)</u>	<u>1/2 (13)</u>
8 x 10 (190 x 240)	9/16 (14)
10 x 12 (240 x 290)	5/8 (16)
12 x 12 (290 x 290)	3/4 (19)

Notes:

- Proportion intermediate sizes.

### 706.04.3 Inspection

Wood products will be inspected by the method outlined in MT 404. Only wood products with worm holes and any staining due to fungus will be inspected in the white. Use only blue stain.

The acceptance of any material or finished members by the Inspector does not prevent their rejection if found defective. Replace rejected material and work at Contractor expense.

### 706.05 TIMBER PILES

Meet the following straightness requirements for both treated and untreated timber piles:

- A straight line from the center of the butt to the center of the tip must lie entirely within the body of the pile. Piles must be free from short crooks that deviate more than 2 1/2 inches (64 mm) from straightness in any 5-foot (1525 mm) length.

#### A. Treated Timber Piles. Furnish treated timber piling of Douglas Fir, Southern Pine, or Western Larch meeting ASTM D 25 requirements, excluding Tables 1 and 2.

Season, condition, and treat piles meeting ASTM D 1760 and AWP Standards and Commodity Specification E for preservative treatment by pressure process. Use creosote oil, creosote coal tar solution, or a 5 percent by weight pentachlorophenol solution or Copper Naphthenate (CuN) for the preservative.

Treat injuries, cuts, and holes in timber pile after treatment with three applications of copper naphthenate solution containing a minimum two percent copper metal meeting AWP M4 requirements.

#### B. Untreated Timber Piles. Furnish untreated timber piles meeting ASTM D 25 requirements, except for Tables 1 and 2.

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**Deleted:** The only acceptable stain in wood products is blue stain.

**Deleted:** Each shipment of treated timber or lumber must be inspected before and after treating at the plant by a Department Inspector. The Inspector must stamp the ends of each accepted piece with the Inspector's copyrighted stamp. File a true impression of the copy-righted stamp with the Department before transporting timber or lumber to the project. Provide the Project Manager the Inspector's itemized report of all timber and lumber inspected, giving temperatures, quantity of preservative, time of treatment, length and sizes of timbers, total footage, and other pertinent information. Treated timber and lumber not bearing the Inspector's stamp in legible form cannot be transported to the project.¶

Each shipment of untreated timber and lumber must be inspected at its source by a Department Inspector. If inspection at the source is, in the Project Manger's opinion impractical the material may be accepted by a "Certificate of Inspection" from a recognized competent grading or inspection bureau or agency.¶

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